

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Is the application of:

Cynthia B. Robinson, *et al.*

Application No. 10/698,072

Filed: October 29, 2003

For: COMBINATION OF  
DEHYDROEPIANDROSTERONE OR  
DEHYDROEPIANDROSTERONE-  
SULFATE WITH A CHROMONE FOR  
TREATMENT OF ASTHMA OR  
CHRONIC OBSTRUCTIVE  
PULMONARY DISEASE

Art Unit: 1644

Examiner: Not Yet Assigned

Confirmation No.: 9179

Atty. Docket: 05882.0073.NPUS01

**Information Disclosure Statement**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Listed on accompanying Form PTO-1449 are documents that may be considered material to the examination of this application, in compliance with the duty of disclosure requirements of 37 C.F.R. §§ 1.56, 1.97 and 1.98.

Where the publication date of a listed document does not provide a month of publication, the year of publication of the listed document is sufficiently earlier than the effective U.S. filing date and any foreign priority date so that the month of publication is not in issue. Applicants have listed publication dates on the attached PTO-1449 based on information presently available to the undersigned. However, the listed publication dates should not be construed as an admission that the information was actually published on the date indicated.

Applicants reserve the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may

not be prior art, and/or to prove that this information may not be enabling for the teachings purportedly offered.

This statement should not be construed as a representation that a search has been made, or that information more material to the examination of the present patent application does not exist. The Examiner is specifically requested not to rely solely on the material submitted herewith. It is further understood that the Examiner will consider information that had been cited by or submitted to the U.S. Patent and Trademark Office in a prior application relied on under 35 U.S.C. § 120. 1138 OG 37, 38 (May 19, 1992).

Applicants have checked the appropriate boxes below.

- 1. This Information Disclosure Statement is being filed;
  - ☐ a. Within three months of the U.S. filing date of a national application other than a continued prosecution application under §1.53(d);
  - ☐ b. Within three months of the date of entry of the national stage as set forth in §1.491 in an international application;
  - c. Before the mailing date of a first Office Action on the merits;
  - ☐ d. Before the mailing of a first Office Action after filing of a request for continued examination under § 1.115.

No statement under 37 C.F.R. § 1.97(e) or fee is required.

or;

- ☐ 2. This Information Disclosure Statement is being filed after the period specified in paragraph 1(a)-1(d) above, but before the mailing date of a Final Rejection or Notice of Allowance, or action that otherwise closes prosecution in the application, and
  - ☐ a. I hereby state that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1), or
  - ☐ b. I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent

office in a counterpart foreign application, and, to my knowledge after making reasonable inquiry, no item of information contained in this Information Disclosure Statement was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2), or

- ☐ c. Attached is our Check No. \_\_\_\_\_ in the amount of \$ \_\_\_\_\_ in payment of the fee under 37 C.F.R. § 1.17(p).
- ☐ 3. This Information Disclosure Statement is being filed more than three months after the U.S. filing date and after the mailing date of a Final Rejection or Notice of Allowance, but on or before payment of the Issue Fee. Attached is our Check No. \_\_\_\_\_ in the amount of \$ \_\_\_\_\_ in payment of the fee under 37 C.F.R. § 1.17(i), and
  - ☐ a. I hereby state that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1), or
  - ☐ b. I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to my knowledge after making reasonable inquiry, no item of information contained in this Information Disclosure Statement was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).
- ☐ 4. Relevance of the non-English language document(s) is discussed in the present specification.

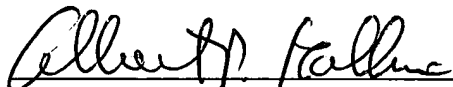
- ☐ 5. The document(s) was/were cited in a corresponding foreign application. An English language version of the foreign search report is attached for the Examiner's information.
- ☐ 6. A concise explanation of the relevance of the non-English language document(s) appears below:
- ☐ 7. The Examiner's attention is directed to co-pending U.S. Patent Application No. \_\_\_\_\_, filed \_\_\_\_\_, which is directed to related technical subject matter. The identification of this U.S. Patent Application is not to be construed as a waiver of secrecy as to that application now or upon issuance of the present application as a patent. The Examiner is respectfully requested to consider the cited application and the art cited therein during examination.
- ☐ 8. Copies of the documents were cited by or submitted to the Office in Application No. \_\_\_\_\_, filed \_\_\_\_\_, which is relied upon for an earlier filing date under 35 U.S.C. § 120. Thus, copies of these documents are not attached. 37 C.F.R. § 1.98(d).

It is respectfully requested that the Examiner initial and return a copy of the enclosed PTO-1449, and to indicate in the official file wrapper of this patent application that the documents have been considered.

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 08-3038 referencing docket number 05882.0073.NPUS01.

Respectfully submitted,

Date: March 26, 2004

  
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Robin C. Chiang (Reg. No. 46,619)

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## LIST OF REFERENCES CITED BY APPLICANT

(Use several sheets if necessary)

PTO FORM 1449

ATTY. DOCKET NO.

02486.0073.NPUS01

APPLICATION NO.

10/698,072

APPLICANT

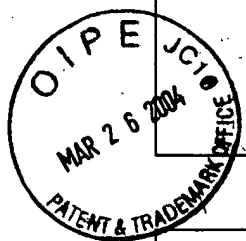
Cynthia B. Robinson, et al.

FILING DATE

October 29, 2003

GROUP

1644



## U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE	
	1.	3,419,578	Dec. 1968	Fitzmaurice et al.				
	2.	3,957,965	May 1976	Hartley et al.				
	3.	4,393,066	Jul. 1983	Garrett et al.				
	4.	4,474,787	Oct. 1984	Cairns et al.				
	5.	4,499,064	Feb. 1985	Shive				
	6.	4,575,498	Mar. 1986	Holmes et al.				
	7.	4,628,052	Dec. 1986	Peat				
	8.	4,760,072	Jul. 1988	Brown et al.				
	9.	4,849,427	Jul. 1989	Nassim et al.				
	10.	4,918,078	Apr. 1990	Brown et al.				
	11.	4,920,115	Apr. 1990	Nestler et al.				
	12.	4,931,441	Jun. 1990	Lawrence				
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	15.	5,021,417	Jun. 1991	Prost				
	16.	5,059,595	Oct. 1991	Le Grazie				
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	22.	5,177,076	Jan. 1993	Nijkerk et al.				
	23.	5,266,312	Nov. 1993	Leung et al.				

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<p align="center"><b>LIST OF REFERENCES CITED BY APPLICANT</b>  <i>(Use several sheets if necessary)</i></p> <p align="center"><b>PTO FORM 1449</b></p>	ATTY. DOCKET NO. <b>02486.0073.NPUS01</b>	APPLICATION NO. <b>10/698,072</b>
	APPLICANT <b>Cynthia B. Robinson, et al.</b>	
	FILING DATE <b>October 29, 2003</b>	GROUP <b>1644</b>

	24.	5,270,305	Dec. 1993	Palmer				
	25.	5,347,005	Sep. 1994	Mueller et al				
	26.	5,407,684	Apr. 1995	Loria et al.				
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	<b>October 29, 2003</b>	<b>1644</b>

	50.	2003/0138434	Jul. 2003	Campbell et al.				
	51.	2003/0139331	Jul. 2003	Martin et al.				
<b>FOREIGN PATENT DOCUMENTS</b>								
*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
	52.	WO 93/16704		PCT				
	53.	WO 96/16680		PCT				
	54.	WO 97/48367		PCT				
	55.	WO 98/03180		PCT				
	56.	WO 00/54763		PCT				
	57.	WO 01/015745		PCT				
	58.	WO 02/069955		PCT				
	59.	WO 02/85296		PCT				
	60.	WO 03/072572		PCT				
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<b>OTHER REFERENCES</b> <i>(Including Author, Title, Date, Pertinent Pages, Etc.)</i>								
	62.	Araneo et al., "Dehydroepiandrosterone Reduces Progressive Dermal Ischemia Caused by Thermal Injury", <i>J. Surg. Res.</i> 59(2):250-62 (1995).						
	63.	Bonnett et al., "Dehydroepiandrosterone (DHEA) prevents and reverses chronic hypoxic pulmonary hypertension," <i>PNAS</i> 100(16):9488-93 (2003).						
	64.	Budavari, The Merck Index 11 <sup>th</sup> ed., 1989, pp. 660-661, monograph 4141.						
	65.	Coleridge et al., "Intravenous aminophylline confers no benefit in acute asthma treated with intravenous steroids and inhaled bronchodilators", <i>Aust. N.Z. J. Med.</i> 23:348-54 (1993).						
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	67.	Dompeling et al., "Treatment with Inhaled Steroids in Asthma and Chronic Bronchitis: Long Term Compliance and Inhaler Technique", <i>Family Practice</i> 9(2):161-6 (1992).						

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70.	Dworski et al., "Conspectus: Inhaled Steroids in Asthma", <i>Comprehensive Therapy</i> , 18:3 (1992).
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72.	Fehér, et al., " Dehydroepiandrosterone Therapy of Patients with Corticosteroid Dependent Bronchial Asthma," <i>Natl. Institute of Rheumatism and Physiotherapy, in XIII Congress of the European Academy of Allergology and Clinical Immunology</i> , eds. (Saba, et al., Debrecen Hungary (1986).
73.	Hampl et al., "Dehydroepiandrosterone sulphate reduces chronic hypoxic pulmonary hypertension in rats," <i>J. Eur. Respir.</i> 21:862-5 (2003).
74.	Holzmann et al., "Therapy of Psoriasis with Dehydroepiandrosterone-Enanthate. II. Intramuscular Depot Application of 300 mg", <i>Arch. Dermatol. Forsch.</i> 247(1):23-8 (1973) (German with English Abstract).
75.	Hummel et al., "Comparison of oral-steroid sparing by high-dose and low-dose inhaled steroid in maintenance treatment of severe asthma", <i>The Lancet</i> , 340(8834/8835):1483-7 (1992).
76.	Itagaki et al., "Effect of Cortisol on the Release of Human Decidual", <i>Caplus</i> , 114875 (1991) (Japanese with English Abstract).
77.	Koó et al., "Our experiences with Dehydroepiandrosterone Therapy in Steroid-Dependent Intrinsic Bronchial Asthma", <i>Orvosi Hetilap</i> 128(38):1995-7 (1987) (Hungarian).
78.	Koó et al., " Our experiences with Dehydroepiandrosterone Therapy in Steroid-Dependent Intrinsic Bronchial Asthma ", <i>Orvosi Hetilap</i> 128(38):1995-7 (1987) (English translation).
79.	Lejeune, "Pathogenesis of Mental Impairment in Trisomy 21", <i>Annales de Génétique</i> , 92:27643 (1996) (French with English Abstract).
80.	Mileva et al., "Androstenedione, DHEA sulfate, cortisol, aldosterone and testosterone in bronchial asthma patients", 07608054 (1990) (Russian with English Abstract).
81.	Nakagawa, et al., "The Properties of Water of Crystallization of Sodium Prasterone Sulfate," <i>Chem. Pharm. Bull</i> 29(5):1466-9 (1981)
82.	Nakagawa, et al., "The Grinding and Drying on the Solid State Stability of Sodium Prasterone Sulfate," <i>Chem. Pharm. Bull</i> 30(1):242-8 (1982)
83.	Pashko et al., "Inhibition of 7,12-dimethylbenz(a)anthracene-induced Skin Papillomas and Carcinomas by Dehydroepiandrosterone and 3-beta-methylandro-5-en-17-one in mice", <i>Cancer Res.</i> 45(1):164-6 (1985).

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84.	Peeters <i>et al.</i> , "Differences in Purine Metabolism in Patients with Down's Syndrome", <i>J. Intellect. Diabil. Res.</i> 37:471 (1993). Abstract.
85.	Reed, "Aerosol Steroids as Primary Treatment of Mild Asthma", <i>New England J. Med.</i> , 325(6):425-6 (1991).
86.	Rowe <i>et al.</i> , "Effectiveness of Steroid Therapy in Acute Exacerbations of Asthma: A Meta-analysis", <i>Amer. J. Emergency Med.</i> , 10(4):301-10 (1992).
87.	Sasaki <i>et al.</i> , "Cervical Ripening with Dehydroepiandrosterone Sulphate", <i>Br. J. Obstet. Gynaecol.</i> 89(3):195-8, (1982).
88.	Sciarra <i>et al.</i> , "Aerosols", Remington's Pharmaceutical Sciences, 18 <sup>th</sup> ed. (1990), Eds. Gennaro <i>et al.</i> , pp. 1873-5 and 1694-1712.
89.	Sharma <i>et al.</i> , "Screening of potential chemopreventive agents using biochemical markers of carcinogenesis", <i>Cancer Res.</i> 54(22):5848-55 (1994).
90.	Shomali, "The Use of Anti-Aging Hormones. Melatonin. Growth Hormone, Testosterone, and Dehydroepiandrosterone: Consumer Enthusiasm for Unproven Therapies", <i>Md. Med. J.</i> 46(4):181-6 (1997).
91.	Sonka <i>et al.</i> , "Gout and Dehydroepiandrosterone: 3. DHEA Administration", <i>Endokrynologia Polska</i> 24(3):209-18 (1973).
92.	Sur <i>et al.</i> , "Double-blind trial pyroxidine (vitamin B6) in the treatment of steroid-dependent asthma", <i>Ann. Allergy</i> , 70:147-52 (1993).
93.	Schwartz <i>et al.</i> , "Inhibition of 7,12-dimethylbenz[a]anthracene- and urethan-induced lung tumor formation in A/J mice by long-term treatment with dehydroepiandrosterone," <i>Carcinogenesis</i> 2(12):1335-7 (1981)
94.	Van de Graaf <i>et al.</i> , "Respiratory Membrane Permeability and Bronchial Hyperreactivity in Patients with Stable Asthma: Effects of Therapy with Inhaled Steroids", <i>Bronchial Asthma and Respiratory Membrane Permeability</i> 143:362-8 (1991).
95.	Van Vollenhoven <i>et al.</i> , "Dehydroepiandrosterone in SLE. Results of a Double-Blind, Placebo-Controlled, Randomized Clinical Trial.", <i>Arthritis Rheum.</i> 38(12): 1826-31 (1995).
96.	Wolkowitz <i>et al.</i> , "Dehydroepiandrosterone Treatment of Depression", <i>Biol. Psychiatry</i> 41(3):311-8. (1997).

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